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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,380	06/27/2001	John M. Baron	10005759-1	5550

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EXAMINER

SMITH, ARTHUR A

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/894,380	BARON, JOHN M.	
	Examiner	Art Unit	
	Arthur A Smith	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's arguments filed 9/18/03 have been fully considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al. (USPN 5103254).

In reference to claim 1, Bell et al discloses a method of automatically highlighting focused objects within a preview window comprising the steps of: receiving a digital representation of an image; determining a near focus distance; identifying near portions of objects within the image at the near focus distance; determining a far focus distance; identifying far portions of objects within the image at the far focus distance, and highlight the near portions and the far portions of the objects within the image; col. 7 line 51 - col. 8 line 2. Bell et al. does not disclose disabling highlighting of the near portions and the far portions when a user selectable option is selected. It would have been obvious to one of ordinary skill in the art at the time of the invention to supply a user selectable option to disable the highlighting of the near portions and the far portions (in essence an on/off button) to the focus highlighting method of Bell et al. The focus highlighting method set forth by Bell et al. is similar to other camera functions such as red-eye reduction, data imprinting (date or location of photo stored with image), autofocusing,

etc. These functions are added to the camera to aid the user in photography. However, as is sometimes the case the user may not require the aid because the function is not necessary at the instant time or the user is an experienced photographer (an experienced photographer would be able to tell what objects are in focus without the aid of highlighting). As a result many of these functions are provided with user selectable disabling options (on/off switches). Therefore, as it is well known in the art to provide a user selectable disabling options to these type of functions the addition of such an option to the focus highlighting method of Bell et al. would be obvious.

In reference to claim 2, Bell et al discloses wherein the method comprises the step of displaying a digital image including the highlighted near and far portions, col. 3 lines 46-48

In reference to claim 3, Bell et al discloses wherein the method comprises the step of receiving, determining a near focus distance, identifying near portions, determining a far focus distance, identifying far portions, highlight and displaying within a digital camera, col. 7 line 51 - col. 8 line 2 and col. 32-35 (method can be used in a digital camera)

In reference to claim 4, Bell et al discloses wherein the method comprises the step of determining focused portions of the objects between the near portions and the far portions; and highlighting the focused portions, col. 7 line 51 - col. 8 line 2.

In reference to claim 5, Bell et al discloses wherein the method comprises the step of displaying the highlighted focused portions on the digital image, col. 3 lines 46-48.

In reference to claim 6, Bell et al discloses a camera, ref. 10, comprising: an image sensor responsive to a light image projected onto the image sensor, ref. 40, for providing image data, col. 3 lines 27-29; an adjustable focus lens, ref. 14, configured to project the light image onto the image sensor, see fig. 1; a controller, ref. 74, configured to adjust a focus of the adjustable focus lens, col. 4 lines 49-51. Bell et al. does not disclose that the controller, ref. 74, receives the image data from the image sensor, or that the controller further configured to distinguish portions of the image data that represent focused portions of the light image from portions that are not in focus. Instead, Bell et al. discloses that the controller, ref. 74, controls the image sensor, ref. 40, the A/D converter, ref. 66, the memory, ref. 68, and the gradient, ref. 70. These separate components collectively perform the claimed functions, col. 4 lines 25-42 and col. 4 lines 53-56 under the control of the controller, ref. 74. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate all these components, ref. 40, 66, 68, 70 and 74, into one component and then call that component the controller. This would be done for space saving, all these individual components could be located on one IC. Bell et al. also discloses a display, ref. 24 configured to display the image data together with highlighting distinguishing the portions of the image data that represent the focused portions of said light image from said portions that are not in focus, col. 4 lines 1-6. Bell et al. does not specifically disclose a user-selectable option for disabling the highlighting of said portions. It would have been obvious to one of ordinary skill in the art at the time of the invention to supply a user selectable option to disable the highlighting of the near portions and the far

portions (in essence an on/off button) to the focus highlighting method of Bell et al. The focus highlighting method set forth by Bell et al. is similar to other camera functions such as red-eye reduction, data imprinting (date or location of photo stored with image), autofocusing, etc. These functions are added to the camera to aid the user in photography. However, as is sometimes the case the user may not require the aid because the function is not necessary at the instant time or the user is an experienced photographer (an experienced photographer would be able to tell what objects are in focus without the aid of highlighting). As a result many of these functions are provided with user selectable disabling options (on/off switches). Therefore, as it is well known in the art to provide a user selectable disabling options to these type of functions the addition of such an option to the focus highlighting method of Bell et al. would be obvious.

In reference to claim 7, Bell et al discloses where the camera comprises a memory storing a contrast evaluation procedure executable by the controller for distinguishing the portions of the image data that represent the focused portions of the light image from the portions that are not in focus, col. 4 line 57 – col. 5 line 12.

In reference to claim 8, Bell et al discloses wherein said image sensor comprises a two-dimensional array of light detectors, col. 3 lines 55-60.

In reference to claim 9, Bell et al does not specifically disclose wherein said adjustable focus lens includes a focusing motor connected to adjust a configuration of optical elements of said adjustable focus lens in response to a control signal from said

controller. However, it is old and well known in the art that motors are inherent in autofocus cameras as the means to adjust the focusing lens.

In reference to claim 10, Bell et al does not specifically disclose wherein said controller is configured to determine contrast values of said light image. However, it is old and well known in the art that autofocus can be carried out by means of contrast detection.

In reference to claim 11, Bell et al does not disclose wherein said controller is further configured to process said image data for storage in a memory. Instead, Bell et al. discloses that image data is processed for storage in a memory by means of the A/D converter, ref. 66, under the control of the controller, ref. 74. It would have been obvious, as discussed above, to combine the A/D converter and the controller on one IC.

In reference to claim 12, Bell et al does not specifically disclose wherein said controller implements a lossy compression algorithm on said image data to form compressed image data and stores said compressed image data in a memory. However, a lossy compression algorithm is a compressed storage of the image in which some of the data is lost such as in storage of an image in JPEG form. It would have been obvious to one of ordinary skill in the art to store the image in a lossy form to save memory space. The image is not needed for high resolution reproduction but only to demonstrate the highlighted portions.

In reference to claim 14, Bell et al. does not specifically disclose wherein compressing said digital image to provide compressed image data; and storing said

compressed image data in a memory. However, a compressed digital image can take the well JPEG form. It would have been obvious to one of ordinary skill in the art to store the image in a lossy form to save memory space. The image is not needed for high resolution reproduction but only to demonstrate the highlighted portions.

In reference to claim 15, Bell et al. discloses wherein said determining said near and said far portions is performed from identified edges of objects contained within the digital representation of an image, col. 5 lines 11-22.

In reference to claim 16, Bell et al. does not specifically disclose wherein said highlighting comprises blinking said near and far portions of said image in focus. It would have been obvious to one of ordinary skill in the art to provide modifications to the highlighted regions, such as blinking or even using a color outline. Such a modification would be done in order to increase the visibility of the highlighted area to an inexperienced photographer.

In reference to claim 17, Bell et al. discloses a focus highlighting system comprising: a processor, ref. 74 for highlighting focused portions of an image, col. 4 lines 31-36 and col. 4 lines 54-56 (The processor highlights the focused portions through control of the gradient operator, ref. 70); an autofocus mechanism configured to determine portions of an image within focus, col. 3 lines 27-40; a display configured to display a digital image including highlighting, col. 4 lines 1-6; and a memory configured to store said digital representation of said image, col. 4 lines 25-31. Bell et al. does not disclose a disabling feature which disables highlighting when selected by a user. It would have been obvious to one of ordinary skill in the art at the time of the invention to

supply a disabling feature which disables highlighting when selected by a user (in essence an on/off button) to the focus highlighting method of Bell et al. The focus highlighting method set forth by Bell et al. is similar to other camera functions such as red-eye reduction, data imprinting (date or location of photo stored with image), autofocusing, etc. These functions are added to the camera to aid the user in photography. However, as is sometimes the case the user may not require the aid because the function is not necessary at the instant time or the user is an experienced photographer (an experienced photographer would be able to tell what objects are in focus without the aid of highlighting). As a result many of these functions are provided with a disabling feature selected by a user (on/off switches). Therefore, as it is well known in the art to provide a disabling feature selected by a user to these type of functions the addition of such an option to the focus highlighting method of Bell et al. would be obvious.

In reference to claim 18, Bell et al. discloses wherein: said autofocus calculates a near focus distance and determines near portions of objects using said near focus distance, col. 7 lines 51-61.

In reference to claim 19, Bell et al. discloses wherein: said autofocus calculates a far focus distance and determines far portions of objects using said far focus distance, col. 7 lines 51-61.

In reference to claim 20, Bell et al. discloses wherein: said portions of said image include said near focus portions and said far focus portions, col. 7 lines 51-61.

In reference to claim 21, Bell et al. does not specifically disclose wherein said highlighting includes blinking. It would have been obvious to one of ordinary skill in the art to provide modifications to the highlighted regions, such as blinking or even using a color outline. Such a modification would be done in order to increase the visibility of the highlighted area to an inexperienced photographer.

Response to Arguments

Applicant's arguments filed 9/18/03 have been fully considered but they are not persuasive. The Applicant contends that that the Bell reference fails to teach disabling the highlighting of the near and far portions when a user-selectable option is selected and such a limitation is not obvious as set forth in the Examiner's 103 rejection.

First the applicant contends that since the Bell subject highlighting is connected directly with the autofocus feature, it would be improper to modify Bell to include a user-selectable option to disable the highlighting. The examiner disagrees, although the highlighting function and the autofocus are presented together by Bell they are completely separable functions, see col. 1 lines 28-40 (Bell describes the highlighting feature (indication of the subjects) as an additional feature of a camera with an autofocusing function). The highlighting function is only present to aid the user in detecting what items are being brought into focus by the autofocus unit, col. 1 lines 41-50, and hence the autofocus can operate without the highlighting function. Further, the Examiner is not suggesting an on/off switch for the autofocus feature but an on/off switch for the highlighting function.

Second the applicant cites col. 1 lines 41-50 of Bell to suggest that Bell teaches that a user of the prior art autofocus camera without the highlighting function could not tell what objects were in focus (see page 8 of arguments lines 12-13 "transcending the skill of the user"). Therefore, an off/switch for the highlighting function would go against the teachings of Bell. The examiner disagrees. Bell does not state that the discernment of an object in focus would be impossible without a highlighting function but instead that such discernment would be *easier* with a highlighting function, col. 1 lines 59-61. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, based on knowledge generally available to one of ordinary skill in the art the examiner believes that a photographer would not necessarily require the highlighting feature at all times either because of the skill level of the photographer or the ambient scene in which the photograph is to be taken. For example, if the scene is not a dim one (where discernment of objects in focus can be more difficult, see col. 1 lines 44-48) the highlighting function might not be necessary or if the user is an experienced photographer he would be better able to detect the objects in focus by judging the level of blur in the surrounding objects. One would therefore add a user selectable on/off function to the highlighting feature when not useful or desired (reduce annoyance to the

user extra features complicating the photographing process, a delay in photography) and to provide for a more efficient use of the camera's battery power.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Anderson (US 5496106) discloses a camera an highlighting function that highlights objects in the field of view that are in focus, paragraph 9 and Belz et al. (US 2003/0117511 A1) discloses a camera with an highlighting function that highlights objects in the field of view that are in focus and said highlighting function has a user-selectable disabling option, col. 1 lines 39-62 and col. 5 lines 40-43.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arthur A Smith whose telephone number is (703) 605 1228. The examiner can normally be reached on Monday - Thursday from 8:00 AM to

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5:30 PM. The examiner can also be reached on alternate Fridays during the same hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on (703) 308 2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

AAS
November 24, 2003


RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800